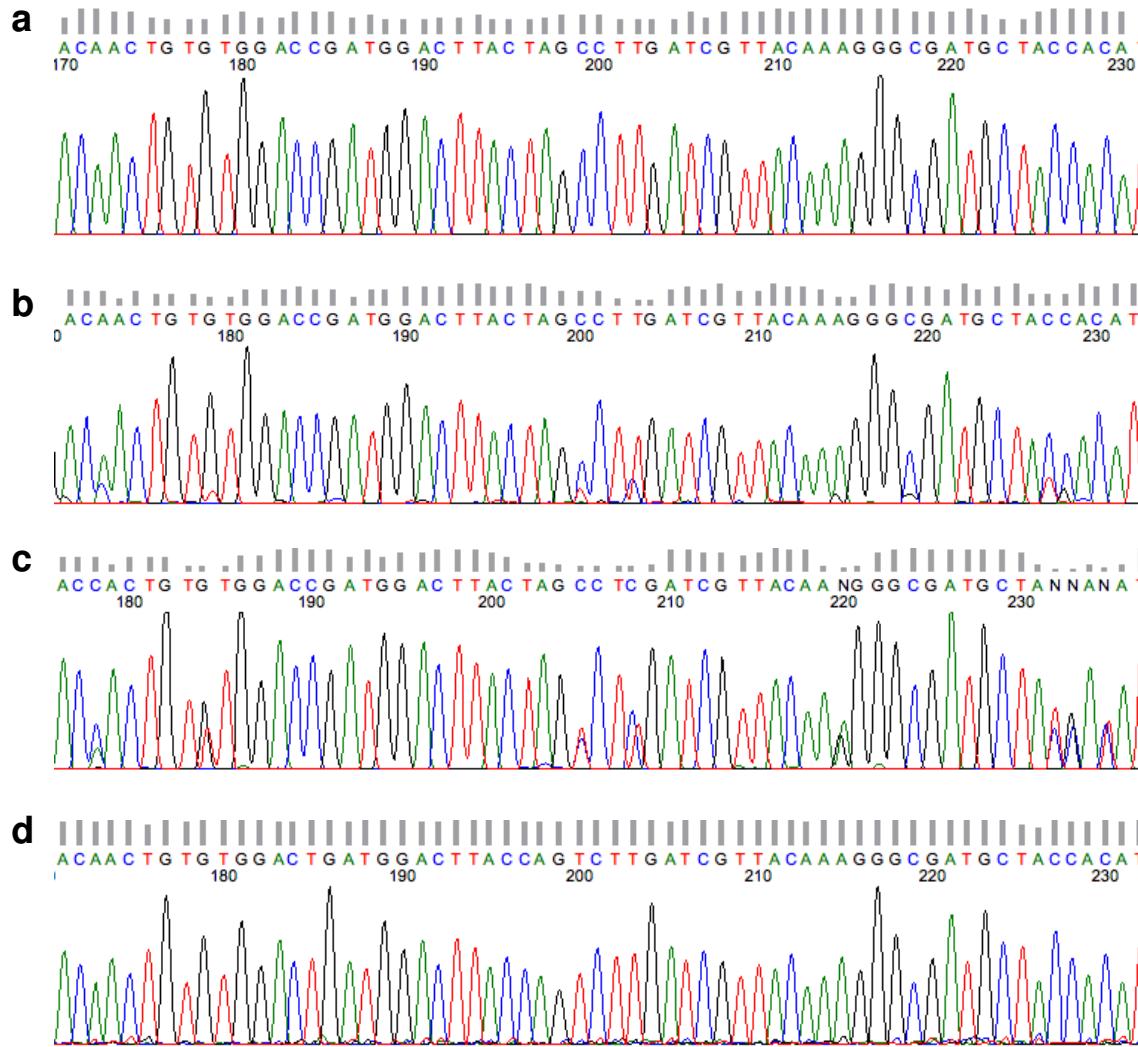
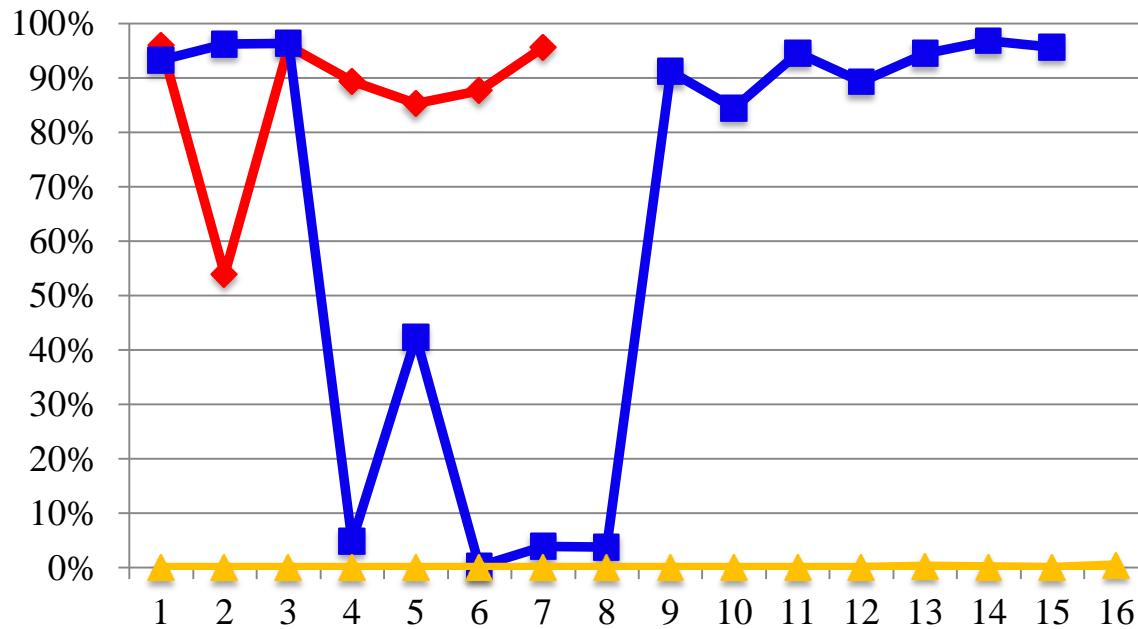


**a****b****c**

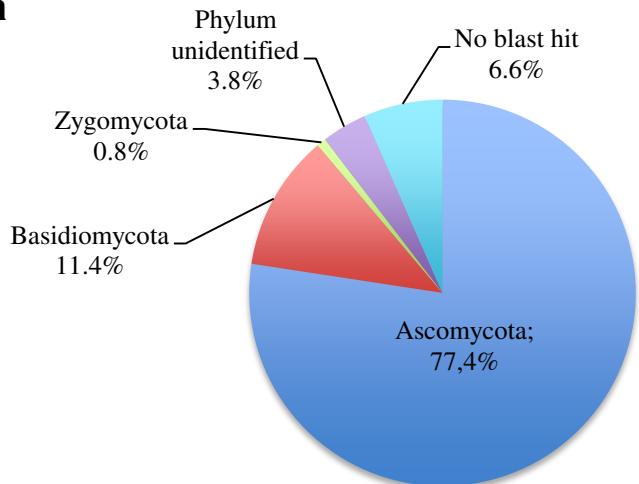
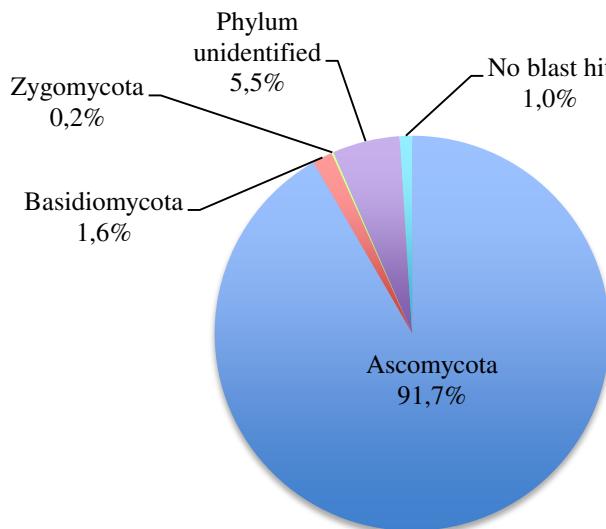
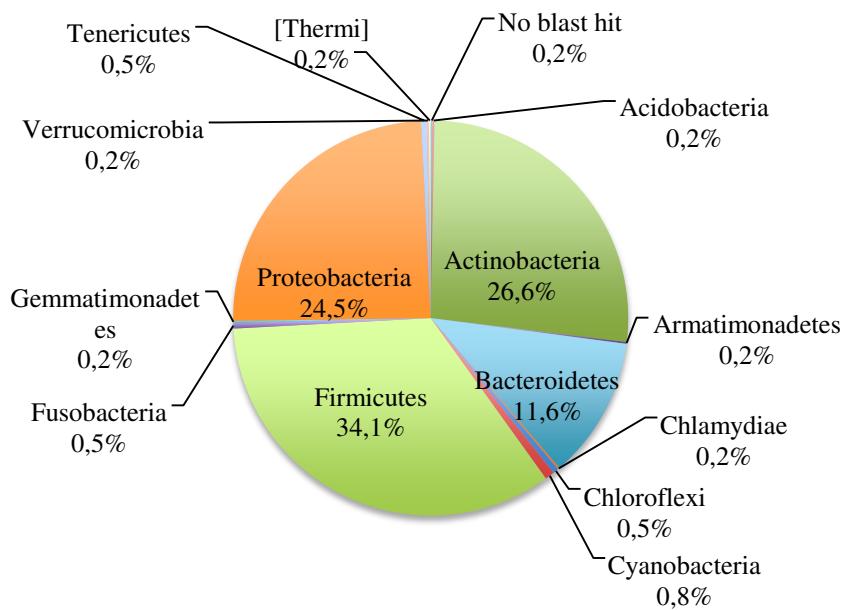
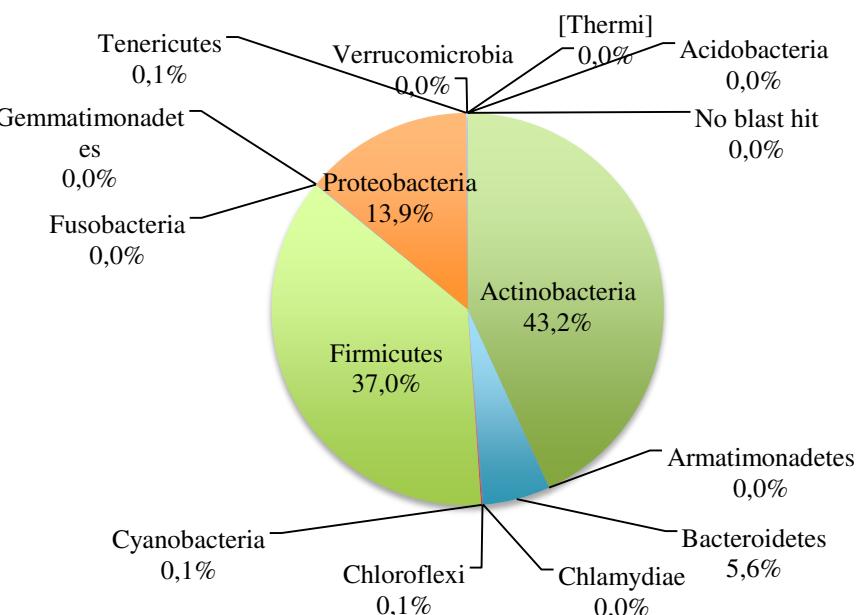
**Figure A. Raw and ripened Pu-erh display differences on both tea appearance (a, c) and the color of infusion (b).** Ripened Pu-erh is generally darker than raw Pu-erh due to the “pile fermentation” involved during its manufacturing process. a, before adding water; b, with water added; c, after discarding the brew. In each subpanel, the left cup represents raw Pu-erh and the right represents ripened Pu-erh. For each type, young Pu-erh tea with the same age was illustrated.



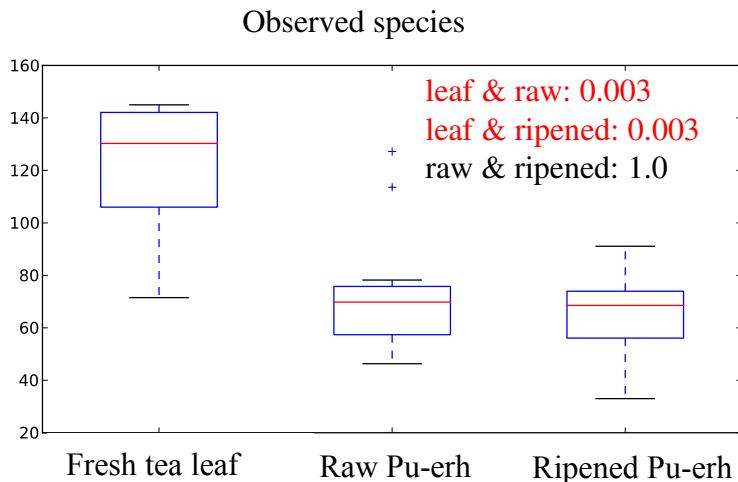
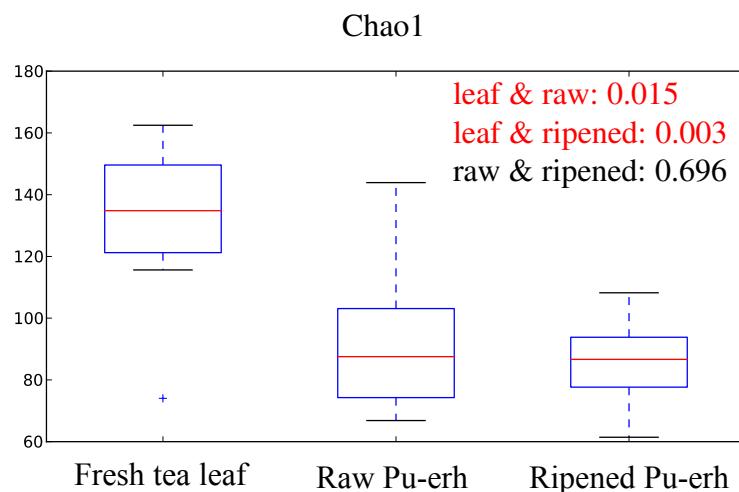
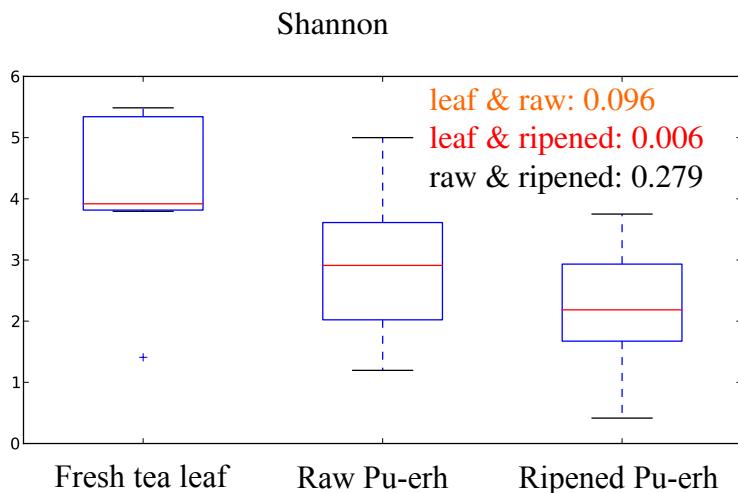
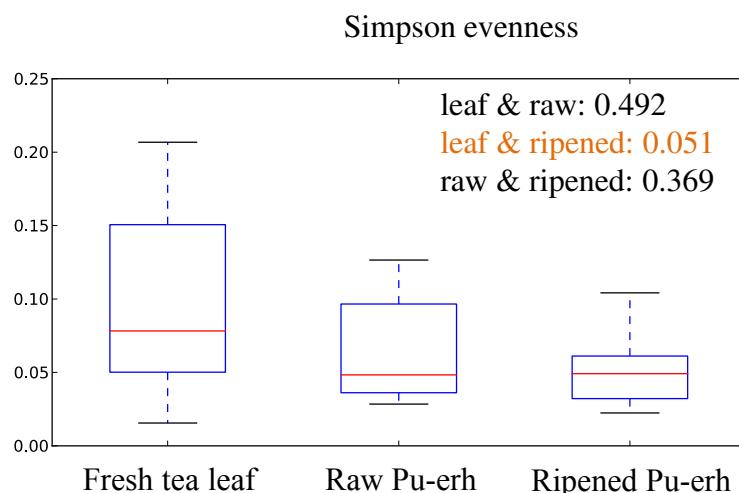
**Figure B. Illustration of *rbcL* sequencing results from samples used in this study.** All fresh leaf and raw Pu-erh samples and most ripened Pu-erh samples showed pure sequences of the tea plant *Camellia sinensis* (a). Several ripened Pu-erh samples, however, showed heterozygous peaks at certain nucleotide sites, but nucleotides characteristic of *C. sinensis* could always be found (b and c). Three ripened Pu-erh samples had homozygous chromatogram during our initial trial, but they actually represented *non-C. sinensis* plants (d); true *C. sinensis* *rbcL* sequence were later detected from these samples using newly extracted DNA solutions.

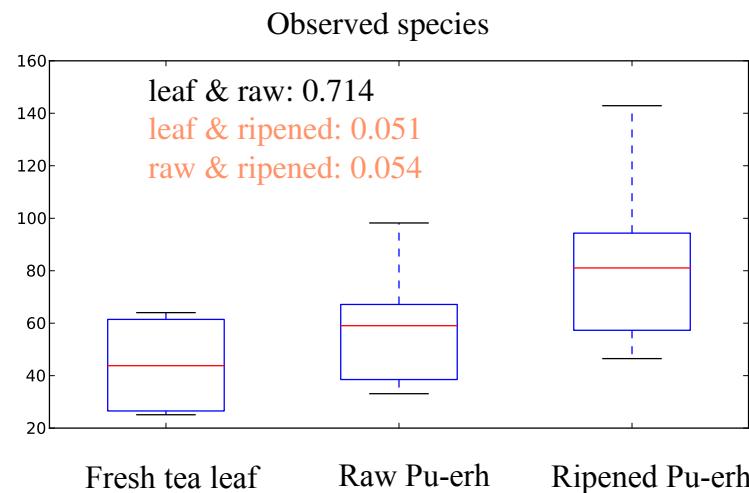
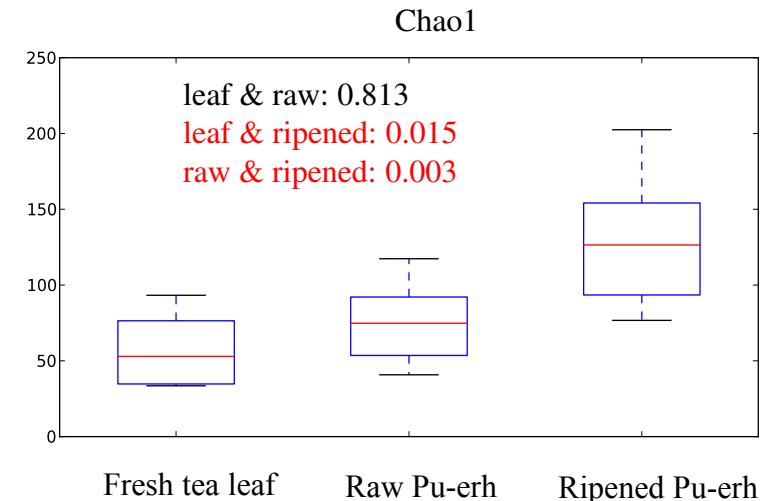
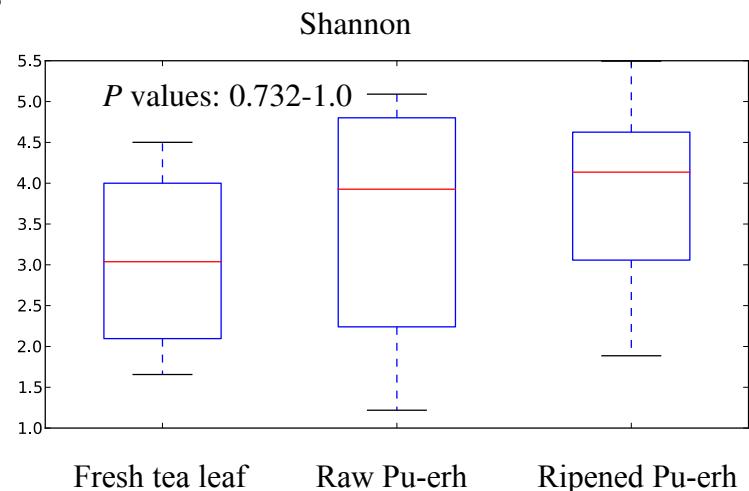
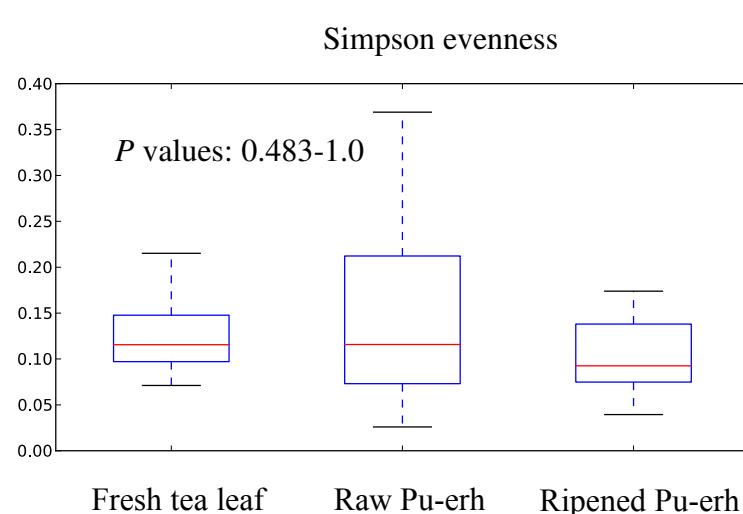


**Figure C. Proportion of chloroplast sequences within each sample in the bacterial 16S dataset.** The x-axis represents different samples of each sample type (i.e., fresh tea leaf, raw Pu-erh and ripened Pu-erh) in the same order as Table S1. Ripened Pu-erh samples (in orange) had only few chloroplast sequences, but fresh tea leaf samples (in red) and raw Pu-erh samples (in blue) contained a great amount of chloroplast sequences. A low proportion of chloroplast sequences were also detected in some aged raw Pu-erh samples (e.g., A6, A7, A8).

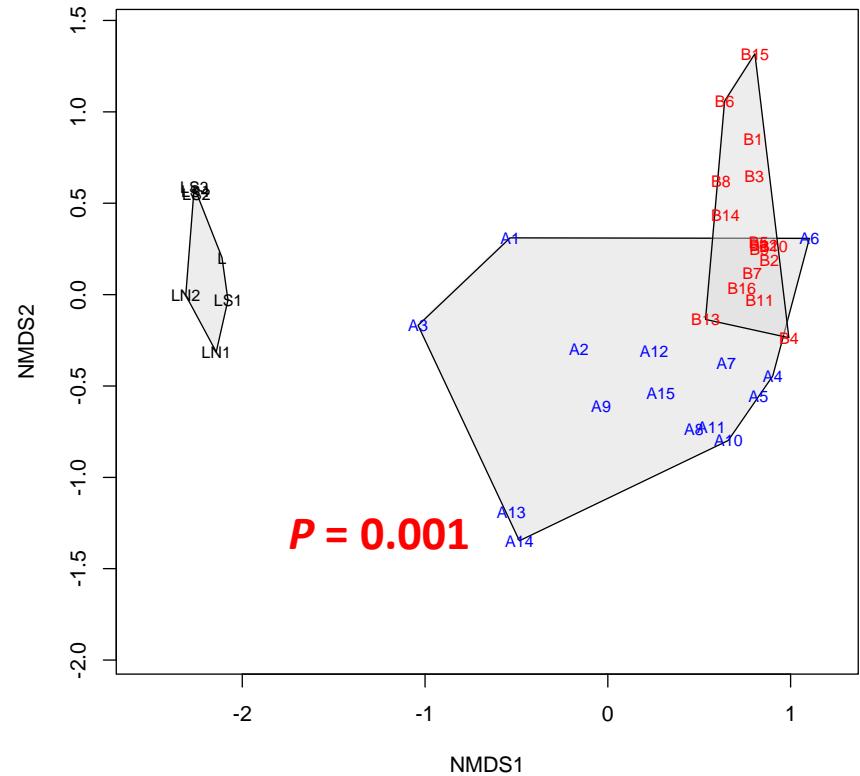
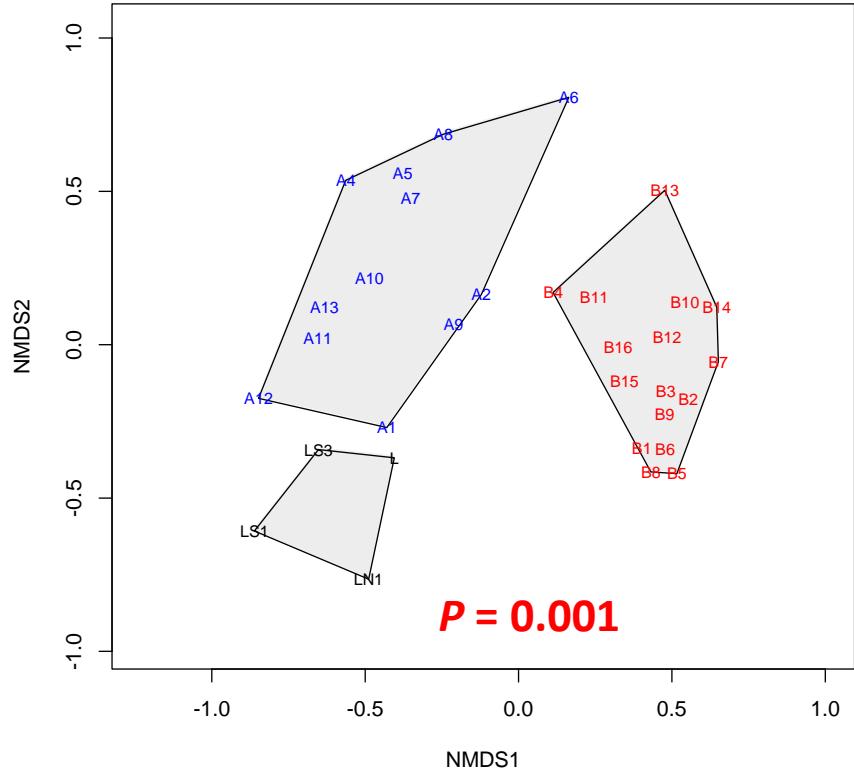
**a****b****c****d**

**Figure D. Relative proportions of OTUs/sequences assigned to each fungal/bacterial phylum.** For fungi, Ascomycota is most abundant according to either OTUs (a) or sequences (b). For bacteria, Actinobacteria, Firmicutes, and Proteobacteria are more dominant than other orders according to either OTUs (c) or sequences (d).

**a****b****c****d**

**e****f****g****h**

**Figure E. Alpha-diversity comparisons among fresh leaves, raw and ripened Pu-erh samples on different alpha-diversity indices. a-d, fungi; e-h, bacteria. P-values were given for pairwise comparisons.**

**a****b**

**Figure F. Ordination (nonmetric multidimensional scaling; NMDS) of microbial community structure (Bray–Curtis dissimilarity) on fresh tea leaf (in black), raw raw Pu-erh (in blue), and ripened Pu-erh (in red). They were significantly different ( $P = 0.001$ ) at both fungal (a) and bacterial (b) community structures.**

**Table A. Metadata used in this study**

Sample ID	Sample type	Age (year)	Age stage <sup>a</sup>	Producer <sup>b</sup>	Plant status <sup>c</sup>	Tea form <sup>d</sup>
L	fresh tea leaf	NA	NA	NA	pure	NA
LN1	fresh tea leaf	NA	NA	NA	pure	NA
LN2	fresh tea leaf	NA	NA	NA	pure	NA
LS1	fresh tea leaf	NA	NA	NA	pure	NA
LS2	fresh tea leaf	NA	NA	NA	pure	NA
LS3	fresh tea leaf	NA	NA	NA	pure	NA
LS4	fresh tea leaf	NA	NA	NA	pure	NA
A1	raw Pu-erh	0	Young	Com1	pure	Loose
A2	raw Pu-erh	1	Young	Com1	pure	Loose
A3	raw Pu-erh	2	Young	Com1	pure	Loose
A4	raw Pu-erh	5	Middle	Com1	pure	Loose
A5	raw Pu-erh	10	Old	Com1	pure	Loose
A6	raw Pu-erh	28	Old	Com2	pure	Compressd
A7	raw Pu-erh	6	Middle	Com2	pure	Compressd
A8	raw Pu-erh	11	Old	Com2	pure	Compressd
A9	raw Pu-erh	1	Young	Com2	pure	Compressd
A10	raw Pu-erh	7	Middle	Com3	pure	Compressd
A11	raw Pu-erh	5	Middle	Com3	pure	Compressd
A12	raw Pu-erh	6	Middle	Com4	pure	Compressd
A13	raw Pu-erh	2	Young	Com4	pure	Compressd
A14	raw Pu-erh	2	Young	Com4	pure	Loose
A15	raw Pu-erh	5	Middle	Com5	pure	Compressd
B1	ripened Pu-erh	0	Young	Com1	pure	Loose
B2	ripened Pu-erh	1	Young	Com1	mix	Loose
B3	ripened Pu-erh	2	Young	Com1	pure	Loose
B4	ripened Pu-erh	5	Young	Com1	mix	Loose
B5	ripened Pu-erh	7	Old	Com2	pure	Loose
B6	ripened Pu-erh	5	Young	Com2	pure	Loose
B7	ripened Pu-erh	4	Young	Com2	mix	Loose
B8	ripened Pu-erh	3	Young	Com2	mix	Loose
B9	ripened Pu-erh	8	Old	Com3	mix	Loose
B10	ripened Pu-erh	7	Old	Com3	pure	Compressd
B11	ripened Pu-erh	6	Old	Com3	mix	Loose
B12	ripened Pu-erh	6	Old	Com3	pure	Loose
B13	ripened Pu-erh	13	Old	Com4	mix	Compressd
B14	ripened Pu-erh	5	Young	Com4	pure	Compressd
B15	ripened Pu-erh	4	Young	Com4	pure	Compressd
B16	ripened Pu-erh	3	Young	Com4	pure	Compressd

<sup>a</sup> According to age distribution of samples, raw Pu-erh samples were binned into three age stages (young, middle aged, and old) and ripened Pu-erh samples into two (young and old).

<sup>b</sup> From a producer, both raw and ripened Pu-erh samples were generally obtained.

<sup>c</sup> "Plant status" is determined by whether non-*Camellia sinensis* *rbcL* sequences were detected from Sanger sequencing. Pure, only sequence of *C. sinensis* was detected; mix, sequences of both *C. sinensis* and other plants were obtained.

<sup>d</sup> "Tea form" means loose tea or compressed tea which is generally in the cake or brick form.

**Table B. Fungal and bacterial indicator taxa detected for fresh tea leaf, raw Pu-erh, ripened Pu-erh, and raw+ripened Pu-erh**

Fungi	Fresh tea leaf
OTU_327	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Cucurbitariaceae;g_Pyrenochaetopsis;s_Pyrenochaetopsis sp
OTU_321	No blast hit
OTU_320	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Massarinaceae;g_unidentified;s_Massarinaceae sp
OTU_323	k_Fungi;p_Basidiomycota;c_Microbotryomycetes;o_Sporidiobolales;f_Incertae sedis;g_Rhodotorula;s_Rhodotorula lamellibrachiae
OTU_486	k_Fungi;p_unidentified;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Fungi sp
OTU_328	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Dothideales;f_Dothioraceae;g_Aureobasidium;s_Aureobasidium sp SWP_2012
OTU_247	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_unidentified;f_unidentified;g_unidentified;s_Sordariomycetes sp
OTU_244	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Tremellales;f_Incertae sedis;g_Cryptococcus;s_Cryptococcus sp QMW_2009a
OTU_245	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Leptosphaeriaceae;g_Coniothyrium;s_Coniothyrium sp JK27
OTU_1789	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_Passalora;s_Passalora sp CBS 113378
OTU_392	k_Fungi;p_Ascomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Ascomycota sp
OTU_1459	k_Fungi;p_Ascomycota;c_Eurotiomycetes;o_Chaetothyriales;f_Chaetothyriaceae;g_unidentified;s_Chaetothyriaceae sp
OTU_556	No blast hit
OTU_129	k_Fungi;p_Basidiomycota;c_Microbotryomycetes;o_Sporidiobolales;f_Incertae sedis;g_Rhodotorula;s_Rhodotorula aurantiaca
OTU_127	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_unidentified;g_unidentified;s_Pleosporales sp
OTU_126	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Hypocreales;f_Nectriaceae;g_Gibberella;s_Gibberella zeae
OTU_159	k_Fungi;p_Ascomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Ascomycota sp
OTU_69	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Incertae sedis;f_Glomerellaceae;g_Colletotrichum;s_Colletotrichum nymphaeae
OTU_68	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Incertae sedis;f_Glomerellaceae;g_Colletotrichum;s_Colletotrichum xanthorrhoeae
OTU_64	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_unidentified;s_Pleosporales sp
OTU_67	k_Fungi;p_unidentified;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Fungi sp
OTU_338	No blast hit
OTU_238	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_Peyronellaea;s_Peyronellaea sancta
OTU_233	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Teratosphaeriaceae;g_Teratosphaeria;s_Teratosphaeria knoxdavesii
OTU_231	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_Periconia;s_Periconia sp
OTU_1484	k_Fungi;p_Ascomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Ascomycota sp
OTU_340	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_Pseudocercospora;s_Pseudocercospora pyracanthigena
OTU_427	k_Fungi;p_Ascomycota;c_Incertae sedis;o_Incertae sedis;f_Incertae sedis;g_Knufia;s_Knufia sp
OTU_61	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_unidentified;g_unidentified;s_Pleosporales sp
OTU_1891	k_Fungi;p_Ascomycota;c_Eurotiomycetes;o_Chaetothyriales;f_Incertae sedis;g_Strelitziana;s_Strelitziana africana
OTU_1387	k_Fungi;p_unidentified;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Fungi sp
OTU_194	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Phaeosphaeriaceae;g_unidentified;s_Phaeosphaeriaceae sp
OTU_251	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Myriangiales;f_unidentified;g_unidentified;s_Myriangiales sp
OTU_191	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Incertae sedis;f_Glomerellaceae;g_unidentified;s_Glomerellaceae sp
OTU_58	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Incertae sedis;f_Plectosphaerellaceae;g_Plectosphaerella;s_Plectosphaerella citrulli
OTU_59	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Phaeosphaeriaceae;g_Phaeoseptoria;s_Phaeoseptoria sp FF_2011
OTU_50	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Xylariales;f_Amphisphaeriaceae;g_Pestalotiopsis;s_Pestalotiopsis foedans
OTU_54	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Tremellales;f_Incertae sedis;g_Hannaella;s_Hannaella luteola
OTU_55	k_Fungi;p_Ascomycota;c_Eurotiomycetes;o_Chaetothyriales;f_Incertae sedis;g_Strelitziana;s_Strelitziana mali
OTU_228	No blast hit
OTU_185	k_Fungi;p_Basidiomycota;c_Microbotryomycetes;o_Sporidiobolales;f_Incertae sedis;g_Rhodotorula;s_Rhodotorula graminis
OTU_90	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_Passalora;s_Passalora loranthi
OTU_99	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Tremellales;f_Incertae sedis;g_Cryptococcus;s_Cryptococcus sp CBS 8358
OTU_1416	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Phaeosphaeriaceae;g_Stagonospora;s_Stagonospora sp AX113
OTU_267	k_Fungi;p_Ascomycota;c_Eurotiomycetes;o_Chaetothyriales;f_unidentified;g_unidentified;s_Chaetothyriales sp
OTU_268	k_Fungi;p_Basidiomycota;c_Microbotryomycetes;o_Sporidiobolales;f_Incertae sedis;g_Rhodotorula;s_Rhodotorula sp 3_23T
OTU_269	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_unidentified;s_Mycosphaerellaceae sp
OTU_174	k_Fungi;p_Ascomycota;c_Taphrinomycetes;o_Taphrinales;f_Taphrinaceae;g_Lalaria;s_Lalaria inositophila
OTU_188	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_Septoria;s_Septoria glycinicola
OTU_176	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Phaeosphaeriaceae;g_Stagonospora;s_Stagonospora sp AX113
OTU_101	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_unidentified;s_Mycosphaerellaceae sp
OTU_103	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Hypocreales;f_Nectriaceae;g_unidentified;s_Nectriaceae sp
OTU_106	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Tremellales;f_Incertae sedis;g_unidentified;s_Tremellales sp
OTU_46	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_Phoma;s_Phoma sp P32E1
OTU_40	k_Fungi;p_unidentified;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Fungi sp
OTU_49	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_unidentified;g_unidentified;s_Pleosporales sp
OTU_48	k_Fungi;p_Basidiomycota;c_Microbotryomycetes;o_Sporidiobolales;f_Incertae sedis;g_Sporobolomyces;s_Sporobolomyces oryzicola
OTU_196	k_Fungi;p_Ascomycota;c_Sordariomycetes;o_Hypocreales;f_Incertae sedis;g_Sarocladium;s_Sarocladium strictum
OTU_410	k_Fungi;p_Basidiomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Basidiomycota sp
OTU_362	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Cucurbitariaceae;g_Curreya;s_Curreya sp
OTU_364	No blast hit
OTU_366	k_Fungi;p_Ascomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Ascomycota sp
OTU_113	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_unidentified;f_unidentified;g_unidentified;s_Tremellomycetes sp
OTU_85	k_Fungi;p_Ascomycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_Phoma;s_Phoma sp FF_2011

OTU\_1120 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Xylariales;f\_Amphisphaeriaceae;g\_Pestalotiopsis;s\_Pestalotiopsis rosea  
OTU\_843 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Phoma;s\_Phoma tropica  
OTU\_119 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Xylariales;f\_Amphisphaeriaceae;g\_Pestalotiopsis;s\_Pestalotiopsis trachicarpicola  
OTU\_270 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_1852 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Phaeosphaeriaceae;g\_unidentified;s\_Phaeosphaeriaceae sp  
OTU\_215 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Leptosphaeriaceae;g\_Coniothyrium;s\_Coniothyrium sidae  
OTU\_214 k\_Fungi;p\_Ascomycota;c\_Lecanoromycetes;o\_Pertusariales;f\_Ochrolechiaceae;g\_Ochrolechia;s\_Ochrolechia frigida  
OTU\_1677 k\_Fungi;p\_Basidiomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Basidiomycota sp  
OTU\_213 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Pseudocercospora;s\_Pseudocercospora robusta  
OTU\_212 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Xylariales;f\_Amphisphaeriaceae;g\_Pestalotiopsis;s\_Pestalotiopsis diversiseta  
OTU\_32 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_34 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Dothideales;f\_Dothioraceae;g\_Selenophoma;s\_Selenophoma mahoniae  
OTU\_200 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Verrucariales;f\_Verrucariaceae;g\_Placiopsis;s\_Placiopsis cinerascens  
OTU\_207 k\_Fungi;p\_Basidiomycota;c\_Tremellomycetes;o\_Tremellales;f\_Incertae sedis;g\_unidentified;s\_Tremellales sp  
OTU\_204 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_299 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Davidiellaceae;g\_Cladosporium;s\_Cladosporium langeronii  
OTU\_110 k\_Fungi;p\_Basidiomycota;c\_Microbotryomycetes;o\_Sporidiobolales;f\_Incertae sedis;g\_Rhodotorula;s\_Rhodotorula lactosa  
OTU\_111 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Incertae sedis;f\_Incertae sedis;g\_Leptospora;s\_Leptospora rubella  
OTU\_292 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Sphaerulina;s\_Sphaerulina tirolensis  
OTU\_476 k\_Fungi;p\_Ascomycota;c\_Leotiomycetes;o\_Helotiales;f\_unidentified;g\_unidentified;s\_Helotiales sp  
OTU\_471 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Herpotrichiellaceae;g\_Capronia;s\_Capronia pilosella  
OTU\_277 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Incertae sedis;f\_Incertae sedis;g\_Leptospora;s\_Leptospora rubella  
OTU\_276 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Stenella;s\_Stenella araguata  
OTU\_274 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Ascocysta;s\_Ascocysta maackiae  
OTU\_279 No blast hit  
OTU\_139 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_unidentified;g\_unidentified;s\_Pleosporales sp  
OTU\_135 k\_Fungi;p\_Basidiomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Basidiomycota sp  
OTU\_130 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_190 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Hypocreales;f\_Nectriaceae;g\_Fusarium;s\_Fusarium sp IBL 03157  
OTU\_1916 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Phaeosphaeriaceae;g\_unidentified;s\_Phaeosphaeriaceae sp  
OTU\_20 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Phoma;s\_Phoma infossa  
OTU\_25 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Septoria;s\_Septoria aegopodina  
OTU\_24 No blast hit  
OTU\_29 k\_Basidiomycota;c\_Tremellomycetes;o\_unidentified;f\_unidentified;g\_unidentified;s\_Tremellomycetes sp  
OTU\_95 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_167 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Incertae sedis;g\_Strelitziana;s\_Strelitziana mali  
OTU\_166 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_unidentified;g\_unidentified;s\_Capnodiales sp  
OTU\_287 k\_Fungi;p\_Basidiomycota;c\_Tremellomycetes;o\_Tremellales;f\_Incertae sedis;g\_Hannaella;s\_Hannaella kunmingensis  
OTU\_264 k\_Fungi;p\_unidentified;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Fungi sp  
OTU\_309 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Mycosphaerella;s\_Mycosphaerella yunnanensis  
OTU\_308 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_303 k\_Fungi;p\_Basidiomycota;c\_Tremellomycetes;o\_unidentified;f\_unidentified;g\_unidentified;s\_Tremellomycetes sp  
OTU\_305 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Myriangiales;f\_unidentified;g\_unidentified;s\_Myriangiales sp  
OTU\_224 No blast hit  
OTU\_1438 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_1837 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Incertae sedis;g\_Strelitziana;s\_Strelitziana mali  
OTU\_1698 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_unidentified;g\_unidentified;s\_Pleosporales sp  
OTU\_152 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Trichosphaerales;f\_Incertae sedis;g\_Nigrospora;s\_Nigrospora sp FF\_2011  
OTU\_153 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Chaetothyriaceae;g\_unidentified;s\_Chaetothyriaceae sp  
OTU\_154 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Capnodiales;f\_Mycosphaerellaceae;g\_Mycosphaerella;s\_Mycosphaerella gregaria  
OTU\_155 k\_Fungi;p\_unidentified;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Fungi sp  
OTU\_83 No blast hit  
OTU\_81 k\_Basidiomycota;c\_Tremellomycetes;o\_Tremellales;f\_Incertae sedis;g\_unidentified;s\_Tremellales sp  
OTU\_175 k\_Fungi;p\_Basidiomycota;c\_Microbotryomycetes;o\_Sporidiobolales;f\_Incertae sedis;g\_Sporobolomyces;s\_Sporobolomyces ogasawarensis  
OTU\_89 k\_Fungi;p\_Basidiomycota;c\_Microbotryomycetes;o\_Sporidiobolales;f\_Incertae sedis;g\_unidentified;s\_Sporidiobolales sp  
OTU\_88 k\_Fungi;p\_Ascomycota;c\_Incertae sedis;o\_Incertae sedis;f\_Incertae sedis;g\_Zymoseptoria;s\_Zymoseptoria ardabiliae  
OTU\_255 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Incertae sedis;g\_Strelitziana;s\_Strelitziana mali  
OTU\_313 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_unidentified;f\_unidentified;g\_unidentified;s\_Dothideomycetes sp  
OTU\_382 k\_Fungi;p\_Basidiomycota;c\_Microbotryomycetes;o\_Sporidiobolales;f\_unidentified;g\_unidentified;s\_Sporidiobolales sp  
OTU\_380 k\_Fungi;p\_Basidiomycota;c\_Tremellomycetes;o\_Tremellales;f\_Incertae sedis;g\_Hannaella;s\_Hannaella oryzae  
OTU\_389 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Letendraea;s\_Letendraea helminthicola  
OTU\_1535 k\_Fungi;p\_Ascomycota;c\_unidentified;o\_unidentified;f\_unidentified;g\_unidentified;s\_Ascomycota sp  
OTU\_1331 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Phoma;s\_Phoma sp 6306  
OTU\_1713 k\_Fungi;p\_Ascomycota;c\_Dothideomycetes;o\_Pleosporales;f\_Incertae sedis;g\_Phoma;s\_Phoma dactyliidis  
OTU\_545 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Chaetothyriales;f\_Herpotrichiellaceae;g\_Cladophialophora;s\_Cladophialophora subtilis  
OTU\_146 k\_Fungi;p\_Basidiomycota;c\_Tremellomycetes;o\_Tremellales;f\_unidentified;g\_unidentified;s\_Tremellales sp

OTU_149	k_Fungi;p_Basidiomycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Basidiomycota sp
OTU_78	k_Fungi;p_Aскомycota;c_unidentified;o_unidentified;f_unidentified;g_unidentified;s_Aскомycota sp
OTU_79	k_Fungi;p_Aскомycota;c_Dothideomycetes;o_Pleosporales;f_Incertae sedis;g_Boeremia;s_Boeremia exigua var. populi
OTU_75	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Chaetothyriales;f_Incertae sedis;g_Strelitziana;s_Strelitziana africana
OTU_71	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Tremellales;f_Incertae sedis;g_Dioszegia;s_Dioszegia catarinonii

Fungi	Raw Pu-erh
OTU_93	k_Fungi;p_Aскомycota;c_Dothideomycetes;o_Pleosporales;f_Pleosporaceae;g_Stemphylium;s_Stemphylium drummondii
OTU_74	k_Fungi;p_Aскомycota;c_Saccharomycetes;o_Saccharomycetales;f_Saccharomycetaceae;g_Saccharomyces;s_Saccharomyces cerevisiae
OTU_201	k_Fungi;p_Basidiomycota;c_Agaricomycetes;o_Boletales;f_Boletaceae;g_Boletus;s_Boletus edulis
OTU_1462	k_Fungi;p_Aскомycota;c_Dothideomycetes;o_Myriangiales;f_unidentified;g_unidentified;s_Myriangiales sp
OTU_35	k_Fungi;p_Aскомycota;c_Dothideomycetes;o_Capnodiales;f_Mycosphaerellaceae;g_Zasmidium;s_Zasmidium xenoparkii
OTU_1518	k_Fungi;p_Aскомycota;c_Sordariomycetes;o_Sordariales;f_Sordariaceae;g_Neurospora;s_Neurospora terricola
OTU_1915	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_unidentified;g_unidentified;s_Eurotiales sp
OTU_96	k_Fungi;p_Basidiomycota;c_Tremellomycetes;o_Cystofilobasidiales;f_Cystofilobasidiaceae;g_Cystofilobasidium;s_Cystofilobasidium infirmominiatum
OTU_1690	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus cibarius
OTU_84	k_Fungi;p_Aскомycota;c_Dothideomycetes;o_Capnodiales;f_Davidiellaceae;g_Cladosporium;s_Cladosporium velox

Fungi	Ripened Pu-erh
OTU_1719	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus piperis
OTU_1486	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_unidentified;s_Trichocomaceae sp
OTU_1895	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_unidentified;s_Trichocomaceae sp
OTU_453	k_Fungi;p_Aскомycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_1948	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_41	k_Fungi;p_Zygomycota;c_Incertae sedis;o_Mucorales;f_Lichtheimiaceae;g_Rhizomucor;s_Rhizomucor pusillus
OTU_1293	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_3	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_30	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Penicillium;s_Penicillium brocae
OTU_134	k_Fungi;p_Aokinoycota;c_Dothideomycetes;o_Incertae sedis;f_Eremomycetaceae;g_Arthrographis;s_Arthrographis sp
OTU_1788	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_368	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Incertae sedis;g_Thermomyces;s_Thermomyces lanuginosus
OTU_263	k_Fungi;p_Aokinoycota;c_Saccharomycetes;o_Saccharomycetales;f_unidentified;g_unidentified;s_Saccharomycetales sp
OTU_1760	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_1757	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_unidentified;s_Trichocomaceae sp
OTU_10	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_unidentified;s_Trichocomaceae sp
OTU_11	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_unidentified;s_Trichocomaceae sp
OTU_221	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus ochraceus
OTU_381	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_1555	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger

Fungi	Raw+Ripened Pu-erh
OTU_1488	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus restrictus
OTU_1249	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_125	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1714	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1310	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus niger
OTU_1893	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_unidentified;g_unidentified;s_Eurotiales sp
OTU_1879	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1652	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1841	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1562	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_unidentified;g_unidentified;s_Eurotiales sp
OTU_42	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus sp DY115_21_7_M6
OTU_1798	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_unidentified;g_unidentified;s_Eurotiales sp
OTU_1853	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_9	k_Fungi;p_Aokinoycota;c_Dothideomycetes;o_Myriangiales;f_unidentified;g_unidentified;s_Myriangiales sp
OTU_2	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_unidentified;g_unidentified;s_Eurotiales sp
OTU_1	k_Fungi;p_Aokinoycota;c_Saccharomycetes;o_Saccharomycetales;f_Trichomonascaceae;g_Blastobotrys;s_Blastobotrys adeninivorans
OTU_6	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Penicillium;s_Penicillium citrinum
OTU_4	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Incertae sedis;g_Thermomyces;s_Thermomyces lanuginosus
OTU_1198	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1619	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus sp
OTU_1199	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus cibarius
OTU_1825	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus cibarius
OTU_22	k_Fungi;p_Aokinoycota;c_Sordariomycetes;o_Sordariales;f_Sordariaceae;g_Neurospora;s_Neurospora terricola
OTU_27	k_Fungi;p_Aokinoycota;c_Sordariomycetes;o_Hypocreales;f_Nectriaceae;g_Fusarium;s_Fusarium delphinooides
OTU_1527	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1059	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus penicillioides
OTU_1021	k_Fungi;p_Aokinoycota;c_Dothideomycetes;o_Myriangiales;f_unidentified;g_unidentified;s_Myriangiales sp
OTU_18	k_Fungi;p_Aokinoycota;c_Eurotiomycetes;o_Eurotiales;f_Trichocomaceae;g_Aspergillus;s_Aspergillus subversicolor

OTU\_19 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus penicillioides  
 OTU\_17 k\_Fungi;p\_Ascomycota;c\_Sordariomycetes;o\_Sordariales;f\_Sordariaceae;g\_Neurospora;s\_Neurospora terricola  
 OTU\_12 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus vitricola  
 OTU\_13 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus restrictus  
 OTU\_1554 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus penicillioides  
 OTU\_1626 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus penicillioides  
 OTU\_1343 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_unidentified;g\_unidentified;s\_Eurotiales sp  
 OTU\_1023 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_unidentified;g\_unidentified;s\_Eurotiales sp  
 OTU\_1334 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_unidentified;g\_unidentified;s\_Eurotiales sp  
 OTU\_1936 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus penicillioides  
 OTU\_1727 k\_Fungi;p\_Ascomycota;c\_Eurotiomycetes;o\_Eurotiales;f\_Trichocomaceae;g\_Aspergillus;s\_Aspergillus penicillioides  
 OTU\_1801 k\_Fungi;p\_Ascomycota;c\_Saccharomycetes;o\_Saccharomycetales;f\_Trichomonascaceae;g\_Blastobotrys;s\_Blastobotrys adeninivorans

#### Bacteria Fresh tea leaf

OTU\_1811 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonas; s\_  
 OTU\_125 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_Methylobacterium; s\_adhaesivum  
 OTU\_158 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_; s\_  
 OTU\_65 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_Methylobacterium; s\_  
 OTU\_64 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonas; s\_yabuuchiae  
 OTU\_426 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_  
 OTU\_319 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_viridiflava  
 OTU\_145 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_; s\_  
 OTU\_456 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Kineosporiaceae; g\_Kineococcus; s\_  
 OTU\_756 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Curtobacterium; s\_  
 OTU\_1474 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_; s\_  
 OTU\_362 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylocystaceae; g\_; s\_  
 OTU\_1197 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_; s\_  
 OTU\_1081 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_Methylobacterium; s\_organophilum  
 OTU\_21 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_; g\_; s\_  
 OTU\_569 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonas; s\_  
 OTU\_959 k\_Bacteria; p\_Cyanobacteria; c\_Oscillatoriophycideae; o\_Oscillatoriales; f\_Phormidiaceae; g\_; s\_  
 OTU\_1238 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Rhizobiaceae; g\_Agrrobacterium; s\_  
 OTU\_1331 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonas; s\_  
 OTU\_2461 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Sphingomonadales; f\_Sphingomonadaceae; g\_Sphingomonas; s\_  
 OTU\_1502 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Microbacterium; s\_  
 OTU\_140 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Xanthomonadales; f\_Xanthomonadaceae; g\_Luteibacter; s\_rhizovicinus

#### Bacteria Raw Pu-erh

OTU\_487 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_Arthrobacter; s\_  
 OTU\_246 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_  
 OTU\_2143 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Methylobacteriaceae; g\_Methylobacterium; s\_adhaesivum  
 OTU\_170 k\_Bacteria; p\_[Thermi]; c\_Deinococci; o\_Deinococcales; f\_Trueperaceae; g\_Truepera; s\_  
 OTU\_183 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Peptostreptococcaceae; g\_; s\_  
 OTU\_945 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_Clostridium; s\_  
 OTU\_86 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_; s\_  
 OTU\_118 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_; g\_; s\_  
 OTU\_1683 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancococcaceae; g\_; s\_  
 OTU\_1782 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_  
 OTU\_1102 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Turicibacterales; f\_Turicibacteraceae; g\_Turicibacter; s\_  
 OTU\_264 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_Clostridium; s\_  
 OTU\_261 k\_Bacteria; p\_Chlamydiae; c\_Chlamydii; o\_Chlamydiales; f\_Parachlamydiaceae; g\_Parachlamydia; s\_  
 OTU\_303 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_; s\_  
 OTU\_124 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Pedobacter; s\_  
 OTU\_491 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_; s\_  
 OTU\_250 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_Clostridium; s\_  
 OTU\_79 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Peptostreptococcaceae; g\_; s\_

#### Bacteria Ripened Pu-erh

OTU\_321 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_  
 OTU\_249 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_; g\_; s\_  
 OTU\_393 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodospirillales; f\_Aacetobacteraceae; g\_; s\_  
 OTU\_397 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Cohnella; s\_  
 OTU\_436 k\_Bacteria; p\_Actinobacteria; c\_Thermoleophilia; o\_Solirubrobacterales; f\_Patulibacteraceae; g\_Patulibacter; s\_  
 OTU\_438 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Ruminococcaceae; g\_; s\_  
 OTU\_1437 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_  
 OTU\_236 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_hodogayensis  
 OTU\_1651 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Hyphomicrobiaceae; g\_Devosia; s\_  
 OTU\_1031 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus; s\_  
 OTU\_2168 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_

OTU\_1975 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_2169 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_2558 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_\_; s\_\_  
OTU\_1521 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardioidaceae; g\_\_; s\_\_  
OTU\_1244 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus; s\_\_  
OTU\_1085 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_cohnii  
OTU\_1921 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_1925 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_\_  
OTU\_2262 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_\_; s\_\_  
OTU\_1866 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_Pigmentiphaga; s\_\_  
OTU\_1867 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_\_; s\_\_  
OTU\_2182 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_\_  
OTU\_2445 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_1468 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_\_; g\_\_; s\_\_  
OTU\_1810 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Rhodocyclales; f\_Rhodocyclaceae; g\_\_; s\_\_  
OTU\_2544 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Pediococcus; s\_\_  
OTU\_2064 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardioidaceae; g\_Aeromicrobium; s\_\_  
OTU\_1771 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_\_  
OTU\_129 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Phyllobacteriaceae; g\_\_; s\_\_  
OTU\_127 k\_Bacteria; p\_Bacteroidetes; c\_Flavobacteriia; o\_Flavobacteriales; f\_Flavobacteriaceae; g\_\_; s\_\_  
OTU\_120 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Ammoniphilus; s\_\_  
OTU\_2358 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Planoococcaceae; g\_Staphylococcus; s\_saprophyticus  
OTU\_69 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_156 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Corynebacteriaceae; g\_Corynebacterium; s\_\_  
OTU\_60 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Sanguibacteraceae; g\_Sanguibacter; s\_soli  
OTU\_63 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_cereus  
OTU\_62 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Actinopolysporaceae; g\_\_; s\_\_  
OTU\_883 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Promicromonosporaceae; g\_Cellulosimicrobium; s\_\_  
OTU\_177 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_\_  
OTU\_1401 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Planoococcaceae; g\_\_; s\_\_  
OTU\_2416 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_347 k\_Bacteria; p\_Proteobacteria; c\_Deltaproteobacteria; o\_Myxococcales; f\_\_; g\_\_; s\_4e-134  
OTU\_421 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Enterobacteriales; f\_Enterobacteriaceae; g\_Escherichia; s\_blattae  
OTU\_1460 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_\_; s\_5e-127  
OTU\_2258 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_\_  
OTU\_2509 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans  
OTU\_317 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_9e-132  
OTU\_1317 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_1442 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Pseudoclavibacter; s\_bifida  
OTU\_768 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_1894 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_1869 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_\_; g\_\_; s\_\_  
OTU\_2270 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum  
OTU\_2273 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_multivorum  
OTU\_2154 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_2151 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_\_  
OTU\_2153 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_59 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_Arbrobacter; s\_\_  
OTU\_50 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_\_  
OTU\_51 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_\_; s\_\_  
OTU\_52 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_hirsuta  
OTU\_53 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_54 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Thermoactinomycetaceae; g\_\_; s\_\_  
OTU\_55 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_Tuberibacillus; s\_calidus  
OTU\_57 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_229 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Peptococcaceae; g\_Desulfosporosinus; s\_meridiei  
OTU\_184 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_\_; s\_\_  
OTU\_94 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Beijerinckiaceae; g\_\_; s\_\_  
OTU\_2462 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardioidaceae; g\_\_; s\_\_  
OTU\_162 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_2136 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_97 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Brevibacillus; s\_reuszeri  
OTU\_91 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_\_  
OTU\_143 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_\_; s\_\_  
OTU\_821 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_350 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_4e-134

OTU\_457 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Cohnella; s\_

OTU\_1569 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_thermoamylorans

OTU\_142 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_98 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Gordoniaceae; g\_Gordonia; s\_

OTU\_2650 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_succinus

OTU\_799 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardoidaceae; g\_Aeromicrobium; s\_

OTU\_1172 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Brucellaceae; g\_; s\_

OTU\_856 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_2488 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Brucellaceae; g\_Ochrobactrum; s\_

OTU\_2655 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_2526 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_1265 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_; s\_

OTU\_269 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Ruminococcaceae; g\_Ruminococcus; s\_

OTU\_187 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dietziaceae; g\_Dietzia; s\_timorensis

OTU\_2137 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodobacterales; f\_Rhodobacteraceae; g\_Paracoccus; s\_

OTU\_2392 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_1844 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_1563 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_1841 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_; s\_

OTU\_2466 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_; g\_; s\_

OTU\_2463 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_2261 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_

OTU\_1281 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardoidaceae; g\_Aeromicrobium; s\_

OTU\_121 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_

OTU\_1283 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_thermoamylorans

OTU\_1287 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_; g\_; s\_

OTU\_2522 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_; g\_; s\_

OTU\_2483 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_2001 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_Sinomonas; s\_

OTU\_101 k\_Bacteria; p\_Bacteroidetes; c\_Cytophagia; o\_Cytophagales; f\_Cytophagaceae; g\_; s\_

OTU\_103 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Xanthomonadales; f\_Xanthomonadaceae; g\_Stenotrophomonas; s\_acidaminiphila

OTU\_105 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Xanthomonadales; f\_Xanthomonadaceae; g\_Pseudoxanthomonas; s\_taiwanensis

OTU\_1646 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Brevibacillus; s\_

OTU\_2584 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_46 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_

OTU\_45 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancoccaceae; g\_; s\_

OTU\_42 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Jonesiaceae; g\_; s\_

OTU\_41 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus; s\_acidipiscis

OTU\_1872 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_Tuberibacillus; s\_calidus

OTU\_1871 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Enterococcaceae; g\_Enterococcus; s\_

OTU\_210 k\_Bacteria; p\_Bacteroidetes; c\_[Saprospirae]; o\_[Saprospirales]; f\_Chitinophagaceae; g\_; s\_

OTU\_586 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_; s\_

OTU\_198 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_

OTU\_996 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_

OTU\_2453 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_

OTU\_2482 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus; s\_

OTU\_113 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Cohnella; s\_

OTU\_1743 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_sciuri

OTU\_964 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_1748 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_119 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_2286 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Acinomycetaceae; g\_Bogoriella; s\_caseolytica

OTU\_2220 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_1376 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_2118 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Enterococcaceae; g\_Enterococcus; s\_

OTU\_2551 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_2552 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Enterococcaceae; g\_Enterococcus; s\_haemoperoxidus

OTU\_1206 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_

OTU\_1766 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Ruaniaceae; g\_; s\_

OTU\_1567 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Oxalobacteraceae; g\_; s\_

OTU\_2491 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_Achromobacter; s\_

OTU\_2648 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_1851 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_1852 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_Sinomonas; s\_

OTU\_1857 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancoccaceae; g\_; s\_

OTU\_1993 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_cohnii

OTU\_1996 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_

OTU\_2086 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_2130 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_2256 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_

OTU\_2252 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_Pigmentiphaga; s\_

OTU\_1296 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_2537 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Oceanobacillus; s\_caeni

OTU\_6 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_5 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_succinus

OTU\_2033 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_32 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Corynebacteriaceae; g\_Corynebacterium; s\_varabile

OTU\_30 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_; s\_

OTU\_31 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Brucellaceae; g\_Ochrobactrum; s\_

OTU\_37 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_35 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardioidaceae; g\_Aeromicrobium; s\_

OTU\_38 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_Achromobacter; s\_

OTU\_39 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_

OTU\_2109 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_581 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_2105 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_202 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_; s\_

OTU\_200 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_204 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardiopsaceae; g\_Thermobifida; s\_alba

OTU\_209 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_1470 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_

OTU\_110 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_

OTU\_111 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_

OTU\_294 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_; s\_

OTU\_272 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_[Tissierellaceae]; g\_Sedimentibacter; s\_

OTU\_374 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_; s\_

OTU\_372 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardioidaceae; g\_; s\_

OTU\_279 No blast hit

OTU\_686 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_; s\_

OTU\_138 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_872 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Cohnella; s\_

OTU\_135 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_ginsengihumi

OTU\_2428 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_137 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_

OTU\_130 k\_Bacteria; p\_Bacteroidetes; c\_[Saprosirae]; o\_[Saprosirales]; f\_Chitinophagaceae; g\_; s\_

OTU\_1613 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_; s\_

OTU\_1107 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Rhodocyclales; f\_Rhodocyclaceae; g\_; s\_

OTU\_1104 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Pediococcus; s\_

OTU\_190 k\_Bacteria; p\_Proteobacteria; c\_Deltaproteobacteria; o\_Myxococcales; f\_Myxococcaceae; g\_Myxococcus; s\_

OTU\_2631 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_

OTU\_1044 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_; s\_

OTU\_361 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Hyphomicrobiaceae; g\_Devosia; s\_

OTU\_1969 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_; s\_

OTU\_2280 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum

OTU\_2369 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_1820 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_1910 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Rarobacteraceae; g\_Rarobacter; s\_

OTU\_1911 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Pediococcus; s\_

OTU\_1786 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_

OTU\_2123 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_

OTU\_2026 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Actinomycetaceae; g\_Bogoriella; s\_caseolytica

OTU\_2022 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_thermoamylovorans

OTU\_2433 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_; s\_

OTU\_2225 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_

OTU\_1796 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_multivorum

OTU\_2330 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_

OTU\_20 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Listeriaceae; g\_Listeria; s\_grayi

OTU\_27 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_

OTU\_26 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_

OTU\_29 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_Rhodospirillum; s\_rubrum

OTU\_1792 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_

OTU\_2058 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_

OTU\_2052 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_2608 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_564 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Lactobacillus; s\_brevis  
OTU\_181 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_96 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_\_; g\_\_; s\_\_  
OTU\_165 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Methylophilales; f\_Methylophilaceae; g\_\_; s\_\_  
OTU\_169 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Prauserella; s\_rugosa  
OTU\_286 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_\_; s\_\_  
OTU\_464 k\_Bacteria; p\_Verrucomicrobia; c\_[Spartobacteria]; o\_[Chthoniobacterales]; f\_[Chthoniobacteraceae]; g\_heteroC45\_4W; s\_\_  
OTU\_1594 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Halalkalibacillus; s\_halophilus  
OTU\_223 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_\_; g\_\_; s\_\_  
OTU\_225 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiaceae; g\_Alkaliphilus; s\_transvaalensis  
OTU\_227 k\_Bacteria; p\_Firmicutes; c\_AHT28; o\_\_; f\_\_; g\_\_; s\_\_  
OTU\_415 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_Streptomyces; s\_\_  
OTU\_419 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodobacterales; f\_Rhodobacteraceae; g\_Paracoccus; s\_aminovorans  
OTU\_418 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_865 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_550 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Promicromonosporaceae; g\_Luteimicrobium; s\_subarcticum  
OTU\_1133 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_1131 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_\_  
OTU\_1355 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_sciuri  
OTU\_1050 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Promicromonosporaceae; g\_Xylanimicrobium; s\_\_  
OTU\_1799 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum  
OTU\_1764 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_2590 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_1809 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancoccaceae; g\_\_; s\_\_  
OTU\_2292 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_\_  
OTU\_2351 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_2006 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans  
OTU\_2331 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans  
OTU\_1909 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_1908 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_1422 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Sporolactobacillaceae; g\_\_; s\_\_  
OTU\_2193 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancoccaceae; g\_Staphylococcus; s\_saprophyticus  
OTU\_2580 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardoidaceae; g\_\_; s\_\_  
OTU\_2586 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_2427 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_2342 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans  
OTU\_2347 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Pediococcus; s\_\_  
OTU\_1638 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Phyllobacteriaceae; g\_\_; s\_\_  
OTU\_153 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_Coprococcus; s\_\_  
OTU\_150 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Actinopolysporaceae; g\_\_; s\_\_  
OTU\_151 k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae; g\_\_; s\_\_  
OTU\_18 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Enterobacteriales; f\_Enterobacteriaceae; g\_Enterobacter; s\_\_  
OTU\_19 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_2e-141  
OTU\_14 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodobacterales; f\_Rhodobacteraceae; g\_\_; s\_\_  
OTU\_15 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_Streptomyces; s\_\_  
OTU\_16 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Enterobacteriales; f\_Enterobacteriaceae; g\_Enterobacter; s\_gergoviae  
OTU\_17 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_\_; s\_\_  
OTU\_10 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_11 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_\_  
OTU\_12 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_aureum  
OTU\_13 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacterii; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Sphingobacterium; s\_\_  
OTU\_2165 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_\_  
OTU\_154 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_2043 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Pseudoclavibacter; s\_bifida  
OTU\_675 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_\_; s\_\_  
OTU\_330 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_\_  
OTU\_83 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Promicromonosporaceae; g\_Xylanimicrobium; s\_pachnodae  
OTU\_82 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Virgibacillus; s\_halophilus  
OTU\_80 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacterii; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_\_; s\_\_  
OTU\_222 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_\_; s\_\_  
OTU\_84 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacterii; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_Olivibacter; s\_\_  
OTU\_179 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacterii; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_\_; s\_\_  
OTU\_89 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardiaceae; g\_Rhodococcus; s\_ruber  
OTU\_1905 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans

OTU\_254 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Caulobacterales; f\_Caulobacteraceae; g\_Brevundimonas; s\_diminuta  
 OTU\_701 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_  
 OTU\_2652 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Dermabacteraceae; g\_Brachybacterium; s\_  
 OTU\_2172 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Micrococcaceae; g\_; s\_  
 OTU\_2517 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_  
 OTU\_1644 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_  
 OTU\_1976 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Anaerobacillus; s\_  
 OTU\_1709 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_succinus  
 OTU\_1022 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Alcaligenaceae; g\_; s\_  
 OTU\_2599 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_  
 OTU\_1508 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_  
 OTU\_1558 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_succinus  
 OTU\_2329 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodobacterales; f\_Rhodobacteraceae; g\_Paracoccus; s\_  
 OTU\_2202 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Brevibacteriaceae; g\_Brevibacterium; s\_  
 OTU\_1934 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_coagulans  
 OTU\_2344 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Streptomycetaceae; g\_Streptomyces; s\_  
 OTU\_2456 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Beutenbergiaceae; g\_Serinibacter; s\_salmoneus  
 OTU\_1807 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Rarobacteraceae; g\_Rarobacter; s\_  
 OTU\_2511 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Microbacteriaceae; g\_Leucobacter; s\_  
 OTU\_109 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Burkholderiaceae; g\_Pandoraea; s\_  
 OTU\_348 k\_Bacteria; p\_Bacteroidetes; c\_Flavobacteriia; o\_Flavobacteriales; f\_Flavobacteriaceae; g\_; s\_  
 OTU\_665 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Nocardoidaceae; g\_Aeromicrobium; s\_  
 OTU\_667 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_1e-136  
 OTU\_1504 k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; f\_Brucellaceae; g\_; s\_  
 OTU\_144 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_Paenibacillus; s\_  
 OTU\_108 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Leuconostocaceae; g\_; s\_  
 OTU\_652 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Aerococcaceae; g\_Facklamia; s\_  
 OTU\_141 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Paenibacillaceae; g\_; s\_  
 OTU\_77 k\_Bacteria; p\_Bacteroidetes; c\_Flavobacteriia; o\_Flavobacteriales; f\_[Weeksellaceae]; g\_; s\_  
 OTU\_147 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Burkholderiaceae; g\_Burkholderia; s\_  
 OTU\_72 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; f\_Lactobacillaceae; g\_Pediococcus; s\_  
 OTU\_73 k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteriia; o\_Sphingobacteriales; f\_Sphingobacteriaceae; g\_; s\_

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#### Bacteria Raw+Ripened Pu-erh

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OTU\_2616 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_  
 OTU\_1665 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_  
 OTU\_90 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Pseudomonadaceae; g\_Pseudomonas; s\_  
 OTU\_99 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Xanthomonadales; f\_Xanthomonadaceae; g\_; s\_  
 OTU\_2480 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Staphylococcaceae; g\_Staphylococcus; s\_succinus  
 OTU\_1075 k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Comamonadaceae; g\_Polaromonas; s\_  
 OTU\_4 k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Pseudonocardiaceae; g\_Saccharopolyspora; s\_  
 OTU\_134 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Alicyclobacillaceae; g\_Alicyclobacillus; s\_  
 OTU\_24 k\_Bacteria; p\_Proteobacteria; c\_Gammaproteobacteria; o\_Pseudomonadales; f\_Moraxellaceae; g\_Acinetobacter; s\_  
 OTU\_670 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Bacillaceae; g\_Bacillus; s\_2e-141  
 OTU\_2391 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancococcaceae; g\_Plancococcus; s\_maitriensis  
 OTU\_1769 k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_Plancococcaceae; g\_Plancomicrobium; s\_

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**Table C. ANOSIM and ADONIS test of four variables on fungal/bacterial community in raw/ripened Pu-erh**

		Fungi		Bacteria		
		Binary-Jaccard	Bray-Curtis	Binary-Jaccard	Bray-Curtis	weighted-Unifrac
Age stage on raw Pu-erh	ANOSIM	R	0.139	0.184	0.180	0.326
		P	0.103	0.069	0.098	0.041
	ADONIS	R <sup>2</sup>	0.195	0.201	0.206	0.337
		P	0.006	0.058	0.090	0.023
Age stage on ripened Pu- erh	ANOSIM	R	-0.023	-0.020	0.074	0.261
		P	0.514	0.492	0.209	0.022
	ADONIS	R <sup>2</sup>	0.088	0.063	0.077	0.132
		P	0.090	0.390	0.234	0.016
Producer on raw Pu-erh	ANOSIM	R	0.093	0.112	0.043	0.169
		P	0.271	0.201	0.372	0.142
	ADONIS	R <sup>2</sup>	0.317	0.331	0.108	0.321
		P	0.119	0.179	0.100	0.239
Producer on ripened Pu- erh <sup>a</sup>	ANOSIM	R	0.178 (0.148)	-0.027	0.181 (0.370)	0.064
		P	0.009 (0.305)	0.521	0.045 (0.204)	0.244
	ADONIS	R <sup>2</sup>	0.264 (0.219)	0.188	0.265 (0.261)	0.229
		P	0.009 (0.491)	0.486	0.017 (0.210)	0.206
Plant status on ripened Pu-erh	ANOSIM	R	-0.022	0.196	0.084	0.170
		P	0.548	0.036	0.148	0.045
	ADONIS	R <sup>2</sup>	0.075	0.167	0.071	0.096
		P	0.288	0.054	0.353	0.137
Tea form on raw Pu-erh	ANOSIM	R	0.204	-0.098	0.009	-0.146
		P	0.037	0.856	0.428	0.888
	ADONIS	R <sup>2</sup>	0.085	0.053	0.092	0.048
		P	0.134	0.739	0.425	0.925
Tea form on ripened Pu- erh	ANOSIM	R	0.194	-0.112	0.227	0.129
		P	0.094	0.823	0.061	0.178
	ADONIS	R <sup>2</sup>	0.087	0.023	0.107	0.090
		P	0.110	0.870	0.020	0.159

<sup>a</sup> When we tested for the effect of producers on fungal/bacteria community in ripened Pu-erh tea, significant P values (outside parentheses) were initially obtained using the Binary-Jaccard distance matrices. But when we focused on just two producers whose samples have similar age range, the P values (within parentheses) were not significant again.

**Table D. Mantel test between the fungal and bacterial communities based on either Binary-Jaccard or Bray-Curtis distance matrices**

Tea type	No. of samples	Binary-Jaccard		Bray-Curtis	
		r	P-value	r	P-value
Raw Pu-erh	12	-0.031	0.866	-0.018	0.896
Ripened Pu-erh	16	0.200	0.216	0.410	0.004
	9	0.142	0.493	0.063	0.730

\* For raw Pu-erh, only the 12 samples with sufficient number of sequences were tested. For ripened Pu-erh, we tested both all samples and just the nine samples with pure *Camellia sinensis* detection.

**Table E. The first 15 most abundant bacterial OTUs in fresh tea leaf, raw Pu-erh, and ripened Pu-erh**

Abundance		Fresh tea leaf			Raw Pu-erh			Ripened Pu-erh		
Rank	OTU ID	Bacterial taxon	Occurrence	OTU ID	Bacterial taxon	Occurrence	OTU ID	Bacterial taxon	Occurrence	
1	OTU_21	Burkholderiales sp.	4	OTU_2616	<i>Saccharopolyspora</i> sp.	14	OTU_2480	<i>Staphylococcus succinus</i>	16	
2	OTU_65	<i>Methylobacterium</i> sp.	7	OTU_25	<i>Streptomyces</i> sp.	3	OTU_1748	<i>Micrococcaceae</i> sp.	16	
3	OTU_959	Phormidiaceae sp.	6	OTU_4	<i>Saccharopolyspora</i> sp.	8	OTU_6	<i>Bacillus coagulans</i>	16	
4	OTU_319	<i>Pseudomonas viridiflava</i>	5	OTU_2557	Enterobacteriaceae sp.	13	OTU_2648	<i>Brevibacterium aureum</i>	16	
5	OTU_756	<i>Curtobacterium</i> sp.	6	OTU_61	<i>Turicibacter</i> sp.	3	OTU_2123	<i>Brachybacterium</i> sp.	16	
6	OTU_64	<i>Sphingomonas yabuuchiae</i>	6	OTU_1224	Enterobacteriaceae sp.	5	OTU_13	<i>Sphingobacterium</i> sp.	15	
7	OTU_140	<i>Luteibacter rhizovicinus</i>	4	OTU_24	<i>Acinetobacter</i> sp.	15	OTU_17	<i>Lactobacillaceae</i> sp.	16	
8	OTU_2374	Burkholderiales sp.	1	OTU_2480	<i>Staphylococcus succinus</i>	15	OTU_16	<i>Enterobacter gergoviae</i>	16	
9	OTU_186	<i>Oceanobacillus</i> sp.	1	OTU_75	<i>Sciscionella marina</i>	4	OTU_19	<i>Bacillus</i> sp.	16	
10	OTU_1331	<i>Sphingomonas</i> sp.	6	OTU_79	Peptostreptococcaceae sp.	13	OTU_2616	<i>Saccharopolyspora</i> sp.	15	
11	OTU_2480	<i>Staphylococcus succinus</i>	5	OTU_44	Oxalobacteraceae sp.	14	OTU_18	<i>Enterobacter</i> sp.	16	
12	OTU_145	Microbacteriaceae sp.	6	OTU_81	<i>Amycolatopsis</i> sp.	1	OTU_15	<i>Streptomyces</i> sp.	12	
13	OTU_2651	<i>Pedobacter</i> sp.	1	OTU_87	<i>Prevotella</i> sp.	1	OTU_20	<i>Listeria grayi</i>	16	
14	OTU_125	<i>Methylobacterium adhaesivum</i>	6	OTU_118	Clostridiales sp.	12	OTU_1569	<i>Bacillus thermoamylovorans</i>	16	
15	OTU_383	<i>Paenibacillus</i> sp.	1	OTU_86	Clostridiaceae sp.	12	OTU_1799	<i>Brevibacterium aureum</i>	16	

Occurrence indicates the detection of a given OTU in the seven fresh leaf samples, the 15 raw Pu-erh samples, or the 16 ripened Pu-erh samples.